

REMARKS

Claims 1 to 18 are pending in the case. The Examiner's reconsideration of the rejection is respectfully requested in view of the following remarks.

Claims 1 to 14 have been rejected under 35 U.S.C. 102(a) as being anticipated by Poston et al., *Dextrous Virtual Work*, Communications of the ACM, May 1996, pages 37 to 45. The Examiner stated essentially that Poston teaches all the limitations of claims 1 to 14.

Claim 1 recites, *inter alia*, "determining at least one graphics proximity marker for indicating a proximity of a predetermined portion of an instrument to a target; and rendering the at least one graphics proximity marker such that the proximity of the predetermined portion of the instrument to the target is ascertainable based on a position of a marker on the instrument with respect to the at least one graphics proximity marker." Claim 8 claims, *inter alia*, "a graphics proximity marker generator for generating at least one graphics proximity marker that indicates a proximity of a predetermined portion of an instrument to a target; and a rendering device for rendering the at least one graphics proximity marker such that the proximity of the predetermined portion of the instrument to the target is ascertainable based on a position of a marker on the instrument with respect to the at least one graphics proximity marker."

Poston teaches a system for visualizing and manipulating medical images (see Title). Poston calibrates a real space and a virtual space by having a user match a tip of a real handle, seen through glass, to the apparent position of a marker drawn at stereo coordinates (see Fig. 3, and page 40, paragraph 3). Thus, Poston's marker is a target. Poston does not teach a graphics proximity marker, much less, "rendering the at least one

graphics proximity marker such that the proximity of the predetermined portion of the instrument to the target is ascertainable based on a position of a marker on the instrument with respect to the at least one graphics proximity marker” as claimed in claims 1 and 8. The marker of Poston shown in Figure 3 is a target and has no functionality as a marker for indicating proximity. The marker of Poston is merely a target in un-calibrated space. Poston needs to correct for error between a coordinates of the tip and the perceived coordinates of the marker in the un-calibrated space (see page 40, second column) because among other reasons, the user has no marker for indicating proximity to the target. Poston does not teach an indication of how close the perceived coordinates of the marker (i.e., the coordinates of the tip) are to the actual coordinates of the marker. Accordingly, Poston does not teach graphics proximity markers, essentially as claimed in claims 1 and 8. Accordingly, Poston fails to teach every limitation of claims 1 and 8.

Claims 2 to 7 depend from claim 1. Claims 9 to 14 depend from claim 8. The dependent claims are believed to be allowable for at least the reasons given for claims 1 and 8. At least claims 5 and 12 are believed to be allowable for additional reasons.

Claims 5 and 12 recite, *inter alia*, “wherein the proximity comprises a first measure of proximity for indicating an outer surface of a target volume and a second measure of proximity for indicating an inner portion of the target volume.”

Poston teaches estimating inner and outer contours of the heart, in individual slices. (See page 43.) Poston does not teach a proximity to any contour. The marker of Poston is used in a calibration step and is not used in conjunction with any contour much less and inter and outer surface of a target. Therefore, Poston does not teach, “wherein the proximity comprises a first measure of proximity for indicating an outer surface of a

target volume and a second measure of proximity for indicating an inner portion of the target volume" as claimed in claims 5 and 12. Accordingly claims 5 and 12 are believed to be allowable in view of Poston.

The Examiner's reconsideration of the rejection is respectfully requested.

Claims 15-18 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Poston as applied to claim 1, and further in view of Hon (U.S. Patent No. 6,113,395). The Examiner stated essentially that the combined teachings of Poston and Hon teach or suggest all the limitations of claims 15-18.

Claims 15 and 16 claim "determining a path to a target; and indicating the path." Claims 17 and 18 claim, "a graphic path marker generator for determining at least one graphics path marker that identifies a path to the target."

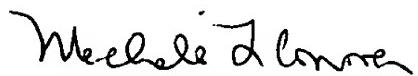
Poston teaches a maker as a point in an un-calibrated coordinate system (see Fig. 3). Poston does not teach or suggest a path, much less determining a path to a target, essentially as claimed in claims 15-18. Poston's marker indicates only one point. Poston's marker does not indicate a path. Therefore, Poston's fails to teach or suggest the limitations of claims 15-18.

Hon teaches a CRT screen showing a view of an instrument (see Fig. 2 and col. 7, lines 28-31). Hon does not teach or suggest a path, much less determining a path to a target, essentially as claimed in claims 15-18. Hon's window, or CRT screen, only gives a view of a scene and does not determine or indicate a path. Hon fails to cure the deficiencies of Poston. The combined teachings of Poston and Hon fail to teach or suggest all the limitations of claims 15 to 18.

For the forgoing reasons, the present application, including claims 1 to 14, is believed to be in condition for allowance. The Examiner's early and favorable action is respectfully urged.

Respectfully Submitted,

Date: December 3, 2003



Michele L. Conover
Reg. No. 34,962
Attorney for Applicants

Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, New Jersey 08830
(732) 321-3013